



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/765,914	01/18/2001	Galen Mark Gareis	6500-1583.2	8471

7590

09/04/2003

ROBERT F. I. CONTE  
LEE, MANN, SMITH, MCWILLIAMS, SWEENEY & OHLSON  
P.O. BOX 2786  
CHICAGO, IL 60690-2786

EXAMINER

MAYO III, WILLIAM H

ART UNIT

PAPER NUMBER

2831

DATE MAILED: 09/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/765,914

Applicant(s)

GAREIS ET AL.

Examiner

William H. Mayo III

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 11-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 11-17, 19, 20, 22, 23, 25 and 26 is/are rejected.
- 7) ☐ Claim(s) 18, 21 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 13, 2003 has been entered.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Ikeda et al (JP Pat Num 4-332406, herein referred to as Ikeda). Ikeda discloses a shield cable (Figs 1-4) capable of being used as a communications cable (i.e. data cable, Page 2, lines 7-10). Specifically, with respect to claim 11, Ikeda discloses a data cable (Fig 1) that may have a plurality of twisted pairs conductors (9, as shown in Fig 4a), a cable covering (i.e. pressing tape, not shown, Page 3, lines 8-10), and an interior support (1) having a longitudinally extending central portion (2) forming the core of the

Art Unit: 2831

support (1), a plurality of projections (denoted by examiner as reference number 25) radically extending from the central portion (2) and having a top end (top surface), wherein each one of the projections (25) is adjacent to two other projections (25) thereby forming a plurality of projections (25) to form a plurality of open areas (3), wherein the cable covering (pressing tape) contacts the top end of each projection (25) to define a plurality of at least four compartments (Page 3, lines 8-10), wherein only one twisted pair conductor (9, Fig 4a) from the plurality of twisted pair conductors (9, as shown in Fig 4a) is disposed in each conductor compartment (at 3), wherein each twisted pair conductor (9) has a first conductor (top 7) surrounded by a first insulation (top 8) and a second conductor (bottom 7) surrounded by a second insulation (bottom 8), wherein the first and second insulated conductors (top and bottom 7 & 8, respectively) are twisted about each other to form a twisted pair conductor (9). With respect to claim 12, Ikeda discloses that the open area (3) is a groove (Page 6, line 8). With respect to claim 13, Ikeda discloses that the projection (25) is an arm (Fig 1).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2831

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1 & 14-17, 19-20, 22-23, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al (JP Pat Num 4-332406, herein referred to as Ikeda) in view of Arroyo et al (Pat Num 4,807,962). Ikeda discloses a shield cable (Figs 1-4) capable of being used as a communications cable (i.e. data cable, Page 2, lines 7-10). Specifically, with respect to claim 1, Ikeda discloses a data cable (Fig 1) that may have a plurality of twisted pairs conductors (9, as shown in Fig 4a), a cable covering (pressing tape, not shown, Page 3, lines 8-10), and an interior support (1) comprising a longitudinally extending central portion (2) forming the core of the support (1), a plurality of splines (denoted by examiner as reference number 25) radially extending from the central portion (2) and having a cross section wherein the splines (25) having the same radius and a top, wherein each one of the splines (25) is adjacent to two other splines (25) thereby forming a plurality of splines (25) to form a plurality of longitudinal channels (3), wherein the cable covering (pressing tape) contacts the top of each spline (25) to define a plurality of four conductor compartments (Page 3, lines 11-12) and wherein a

Art Unit: 2831

twisted pair conductor (9) from the plurality of twisted pairs (9) is disposed in each different open area (3) defined by each of the plurality of adjacent splines (25). With respect to claim 14, Ikeda discloses a data cable (Fig 1) that may have a plurality of twisted pairs conductors (9, as shown in Fig 4a), a cable covering (pressing tape, not shown, Page 3, lines 8-10), and an interior support (1) comprising a longitudinally extending central portion (2) forming the core of the support (1), a plurality of projections (denoted by examiner as reference number 25) extending from the central portion (2), wherein each one of the projections (25) is adjacent to two other projections (25) thereby forming a plurality of projections (25), a open area (3) defined by each of the plurality of adjacent projections (25), wherein the cable covering (pressing tape) contacts the top of each spline (25) to define a plurality of four conductor compartments (Page 3, lines 11-12), wherein one twisted pair conductor (9) from the plurality of twisted pairs (9) is disposed in each different open area (3) defined by each of the plurality of adjacent projections (25), wherein each twisted pair conductor (9, Fig 4a) has a first conductor (top 7) surrounded by an first insulation (top 8) and a second conductor (bottom 7) surrounded by a second insulation (bottom 8), wherein the first and second insulated conductors (top and bottom 7 & 8, respectively) are twisted about each other to form a twisted pair conductor (9). With respect to claim 16, Ikeda discloses that each of said projections (25) is selected from arm (Figs 1-3). With respect to claim 17, Ikeda discloses that each of the open areas (3) is selected from a groove (Page 6, see description for 3). With respect to claims 19, 22, & 25, Ikeda discloses that the cable covering (pressing tape) is only a jacket, wherein the transmission conductors (9) are

Art Unit: 2831

unshielded twisted pair conductors (9) with only one twisted pair conductor (9) in each conductor compartment (3).

However, Ikeda doesn't necessarily disclose the interior support having a triangular cross section wherein the base of the triangle forms a part of the central portion (claim 11), nor the open area having a volume equal to or greater than a volume of at least one projection adjacent to each open area (claim 14), nor the interior support having a helically twist (claim 15), nor the interior support being unshielded (claims 19, 22, & 25), nor the interior support being flame and smoke resistant (claims 20, 23, & 26).

Arroyo et al (Pat Num 4,807,962, herein referred to as Arroyo). Arroyo teaches a cable (Figs 1-6) having a fluted core, which provides strength for the cable as well as the compartments (Col 1, lines 9-12) and is relatively inexpensive (Col 3, lines 21-27). Specifically, with respect to claim 1, Arroyo teaches a cable (20, Fig 1) comprising a fluted strength member (22), having a plurality of grooves (28, i.e. open areas) and ribs (26, i.e. projections), wherein the strength member (22) is star shaped (i.e. triangular shaped splines, Col 4, lines 20-24), wherein the base (44) of the flute (22) forms part of the central portion (24). With respect to claim 14, Arroyo teaches that the flute (22) has an open area (28) that has a volume greater than the volume of the at least one projection (26) adjacent to the open area (28, Fig 1). With respect to claim 15, Arroyo teaches that the flute (49, Fig 3) may be helically twisted (Col 5, lines 10-12). With respect to claims 19, 22, & 25, Arroyo teaches that the flute (22) is an unshielded flute (Fig 2). With respect to claim 20, 23, & 26, Arroyo teaches that the flute (22) is made of

Art Unit: 2831

a material (i.e. glass fiber embedded in epoxy resin), which is inherently flame and smoke resistant.

With respect to claims 1, 14-15, 19-20, 22-23, and 25-26, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the interior support (i.e. flute) of Ikeda to comprise the flute to be made of flame and smoke resistant material having a star-shaped configuration as taught by Arroyo because Arroyo teaches that such a configuration provides strength for the cable as well as the compartments (Col 1, lines 9-12) and is relatively inexpensive (Col 3, lines 21-27) and since it has been held that a change in form cannot sustain patentability where involved is only extended application of obvious attributes from a prior art. *In re Span-Deck Inc. vs. Fab-Con Inc.* (CA 8, 1982) 215 USPQ 835.

### ***Allowable Subject Matter***

7. Claims 18, 21, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: This invention deals with a data cable comprising an interior support wherein the support has a cylindrical longitudinal extending central portion, a plurality of splines radially extending from the central portion along a length and a shield having a lateral fold and being supported by the triangular splines (Claims 18, 21, and 24). The above stated claim limitations, in combination with other claim limitations, is not taught or



Art Unit: 2831

suggested by the prior art of record. While Ikeda discloses that the overall spacer may be of any shape, Ikeda is silent to what shape the projections may have, besides the projections shown in the figures and doesn't disclose the shield having a lateral fold. Also, based on the amendment submitted on January 18, 2002, which encloses a declaration under 1.131, in which the applicant swears that the claimed invention thereof was prepared prior to the September 15, 1995 (priority date of Prudhon reference 5,952,615), most of the relevant prior art cannot be utilized. Therefore, the cited claim limitations, in combination with other claim limitations, is not taught or suggested by any of the prior art references of record.

### ***Response to Arguments***

9. There were no arguments submitted with the request for RCE dated August 13, 2003.

### ***Conclusion***

10. This action is non-final.


### ***Communication***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (703) 306-9061. The examiner can normally be reached on M-F 8:30 a. m.-6:00 p.m.(alternating Friday's off).

Art Unit: 2831

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (703) 308-3682. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



WHM III  
September 1, 2003